

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City

SIXTEENTH CONGRESS
First Regular Session

HOUSE BILL NO. 4500



Introduced by **BAYAN MUNA**
Reps. **NERI J. COLMENARES** and **CARLOS ISAGANI T. ZARATE**

AN ACT
AMENDING SECTION 6 OF REPUBLIC ACT NO. 8436, ALSO KNOWN AS
"AN ACT AUTHORIZING THE COMMISSION ON ELECTIONS TO USE AN
AUTOMATED ELECTION SYSTEM IN THE MAY 11, 1998 NATIONAL OR LOCAL
ELECTIONS AND IN SUBSEQUENT NATIONAL AND LOCAL ELECTORAL
EXERCISES," AS AMENDED BY REPUBLIC ACT NO. 9369, ON THE MINIMUM
SYSTEM CAPABILITIES OF THE AUTOMATED ELECTION SYSTEM

EXPLANATORY NOTE

Amendment to the Automated Elections System (AES) is not tantamount to questioning the results of the past 2010 and 2013 Automated Elections. It is instead aimed at improving the technology that will ensure the protection and sanctity of the ballots.

The AES was instituted for the purpose of eliminating clerical errors or errors involving human intervention, of hastening the canvassing of votes and of eliminating widespread cheating that usually occur during the long process of counting votes. However, the first automated elections were marred with numerous protests due to irregularities and anomalies that arose during election day. Among the major issues is the delayed release of the source code that runs the SMARTMATIC - PCOS machines, and the speculation of vote-rigging after a "60-30-10" pattern was discovered which cast further doubts to the reliability of the AES.

While it seems distant for the 2010 and 2013 AES election issues to be concluded immediately, it is worthwhile to consider recommendations and suggestions from authorities or mandated bodies such as the COMELEC Advisory Council to rectify imperfections and deficiencies in the system as it is likely that issues in the previous elections may end up superseded by subsequent electoral issues. RA 8346 particularly states the function of the Advisory Council to "Recommend the most appropriate, secure, applicable and cost-effective technology to be applied in the AES, in whole or in part, at that specific form in time."

In a resolution by the COMELEC Advisory Council (CAC) for the 2013 National and Local Elections, the use of Optical Mark Reader (OMR) technology was recommended for the following reasons:

- “1. Use of OMR machines will be easier for the BEIs to use;
2. Makes voters education easier;
3. Use of paper-based ballots assures higher auditability;
4. Proven technology;
5. Public acceptance of the technology;

“subject to the following recommended features:

1. Standard and verifiable digital signatures for the machines and personnel;
2. Accurate, reliable and preferably universal time stamps;
3. Appropriately secured machine access facilities (e.g. ports, interfaces)
4. Availability of on-screen voter verification of his/her vote;
5. Scanner should store the raw scanned data and provide ballot authentication feature;
6. Machine printouts should be preserved and have a life span of six (6) years;
7. Printouts should have serial numbers, time stamps and unique machine identifiable features, such as MAC address;
8. Technology process should be render-able to voters' education materials;
9. Source code and circuit schematics should be open for review;
10. Audit logs should be available;
11. Forensics of the hardware as part of the process of qualifying the technology provider;
12. For any purchase, consideration be given by COMELEC to:
 - a. Cost of storage
 - b. Facility for storage
 - c. Reliability of hardware over time
 - d. Cost of money”

Manual elections have ways for checks and balances resorting to ballot recount to validate the winning candidates. But this unfortunately takes years before it can be resolved, if it ever does, especially among the highest elective positions. In automated elections, there must be a way to protect the right of the Filipinos to their votes which will need the expertise of Filipino ITs and those who are equipped and mandated to study and give recommendations on matters pertaining to automated elections.

Hence, the approval of this bill is earnestly sought.

Approved,


Rep. NERI J. COLMENARES

Bayan Muna Party-List


Rep. CARLOS ISAGANI T. ZARATE

Bayan Muna Party-List

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City

SIXTEENTH CONGRESS
Second Regular Session

HOUSE BILL NO. **4500**

Introduced by BAYAN MUNA Representatives
NERI COLMENARES and CARLOS ISAGANI ZARATE

AN ACT
AMENDING SECTION 6 OF REPUBLIC ACT NO. 8436, ALSO KNOWN AS
"AN ACT AUTHORIZING THE COMMISSION ON ELECTIONS TO USE AN
AUTOMATED ELECTION SYSTEM IN THE MAY 11, 1998 NATIONAL OR LOCAL
ELECTIONS AND IN SUBSEQUENT NATIONAL AND LOCAL ELECTORAL
EXERCISES," AS AMENDED BY REPUBLIC ACT NO. 9369, ON THE MINIMUM
SYSTEM CAPABILITIES OF THE AUTOMATED ELECTION SYSTEM

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

SECTION 1. Section 6 of Republic Act No. 8436, as amended by Republic Act No. 9369, is hereby amended to read as follows:

"SEC. 6. *Minimum System Capabilities.* - The automated election system must at least have the following functional capabilities:

- (a) Adequate security against unauthorized access;
- (b) Accuracy in recording and reading of votes as well as the tabulation, consolidation, canvassing, electronic transmission, and storage of results;
- (c) Error recovery in case of non-catastrophic failure of device;
- (d) System integrity which ensures physical stability and functioning of the vote recording and counting process;
- (e) [Provision for voter verified paper audit trail] PROVIDE THE VOTER A SYSTEM OF VERIFICATION TO FIND OUT WHETHER OR NOT THE MACHINE HAS REGISTERED HIS CHOICE, USING ONE OR MORE OF THE FOLLOWING ESTABLISHED VOTER VERIFICATION PROCEDURES:
 - (i) VOTER VERIFIED PAPER AUDIT TRAIL (VV PAT)
 - (ii) VOTER VERIFIED VIDEO AUDIT TRAIL (VV VAT)

(iii) VOTER VERIFIED AUDIO AUDIT TRAIL (VV AAT)

(iv) VOTER VERIFIED BRAILLE AUDIT TRAIL

(f) System auditability which provides supporting documentation for verifying the correctness of reported election results;

(g) An election management system for preparing ballots and programs for use in the casting and counting of votes and to consolidate, report and display election result in the shortest possible time;

(h) Accessibility and being friendly to persons with disabilities (PWDs);

(i) Vote tabulating program for election, referendum or plebiscite;

(j) Accurate ballot counters;

(k) Data retention provision;

(l) Provide for the safekeeping, storing and archiving of physical or paper resource used in the election process;

(m) Utilize or generate official ballots as herein defined;

(n) Provide the voter a system of verification to find out whether or not the machine has registered his choice; [and]

(o) Configure access control for sensitive system data and function;

(P) PROVIDE A FEATURE THAT WILL ALLOW VERIFICATION IF THE SOFTWARE INSTALLED IN ANY COMPONENT OF THE AES IS ONE AND THE SAME AS THAT HELD IN ESCROW WITH THE BANGKO SENTRAL NG PILIPINAS. THE VERIFICATION CODE SHALL BE PRINTED OUT AND COPIES OF THE PRINTOUT SHALL BE POSTED ON THE DOOR AND WALL OF THE PRECINCT/ CANVASSING CENTER. THE VERIFICATION SHOULD BE PART OF THE INITIALIZATION PROCEDURE EXECUTED BY THE BEI OR BOC;

(Q) PROVIDE THE CAPABILITY OF DIGITAL SIGNING OF ALL SOFT COPY DOCUMENTS (ER, COC, SOV, ETC) USING COMPUTER-INDUSTRY-STANDARD SECURE PRIVATE-PUBLIC KEY CRYPTOSYSTEM THAT UTILIZES ESTABLISHED CERTIFICATE AUTHORITIES OR DTI-ACCREDITED CERTIFICATE AUTHORITY; AND

(R) PROVIDE THE CAPABILITY OF DIGITAL SIGNING OF ALL SOFTCOPY DOCUMENTS USING SIGNING HARDWARE THAT DOES NOT COMPROMISE THE PRIVATE KEY OF THE SIGNER, SUCH AS BY EMPLOYING PROCESSOR SMART CARDS FOR EACH SIGNER AND PROCESSOR SMART CARD READERS FOR EACH COMPUTER EQUIPMENT.

In the procurement of this system, the Commission shall develop and adopt an evaluation system to ascertain that the above minimum system capabilities are met. This evaluation

system shall be developed with the assistance of an advisory council. THE COMMISSION IS REQUIRED TO PROCURE COMPUTER HARDWARE AND SOFTWARE SYSTEMS THAT INCLUDE ALL OF THESE CAPABILITIES."

SECTION 2. *Repealing Clause.* - Any law, presidential decree or issuance, executive order, letter of instruction, administrative order, rule or regulation contrary to, or inconsistent with, the provisions of this Act is hereby repealed, modified or amended accordingly.

SECTION 3. *Effectivity Clause.* - This Act shall take effect fifteen (15) days after its publication in at least two (2) newspapers of general circulation.

Approved,